

Location Pacific Ocean, 1st day out Oahu, Hawaiian Is.

Observer P. Gould, B. Sundel, 137/ect,

Date 3 January 1964 Time 1020 to 1810

Weather Ken Smerman, Jim Ludwig - cloudy - several rain squalls - hot, ca 4 foot waves, many white caps - visibility good

[illegible]

January

Location Pacific Ocean, 2nd largest Oahu, Hawaiian Islands
Observer Gould-Swidel-Hut-Amermon-Fulwig Date 4 January 1964 Time 0707 to 1835
Weather completely overcast with clouds, waves up to 6', wind around 18 knots
may rain squalls

SPECIES	Abundance				Breeding			Remarks
	1-10	10-100	100-1000	1000 +	Nests	Eggs	Young	
Laysan Albatross								
Black-footed Albatross		3						1 collected ♀
Wedge-tailed Shearwater	1							
Christmas I. Shearwater								
Audubon's Shearwater								
Bonin I. Petrel	2							
Phoenix I. Petrel								
Bulwer's Petrel								
Sooty Petrel								
Red-tailed Tropicbird								
White-tailed Tropicbird	2							
Masked Booby								
Brown Booby								
Red-footed Booby	1							
Great Frigatebird								
Golden Plover								
Ruddy Turnstone								
Wandering Tattler								
Sanderling								
Bristle-thighed Curlew								
Sooty Tern		13						
Gray-backed Tern								
Brown-winged Tern								
Common Noddy								
Hawaiian Noddy	1							
Blue-gray Noddy								
Fairy Tern	1							
Harcourts storm Petrel	2							
								Total # birds = 32
								Total # flocks = 1
								Total # feeding flocks = 0

Weather

[illegible]

Weather warm & very calm, only north cloudy wind less than 10 knots most of the time less than 5 knots. - ocean very smooth

[illegible]

Location Pacific Ocean, 5th day out Oahu, Hawaiian Islands
Observer ~~Coult-Sundell-Fleet-Amerman-Johwig~~ Date 7 January 1964 Time 0540 to 1800
Weather warm, calm, clear + winds mostly below 10 knots

[illegible]

Location Pacific Ocean, 7th day out Oahu, Grid Area
 Observer Gould-Sundell-Heist-American-Ludwig Date 9 January, 1964 Time 0540 to 1830
 Weather clear, warm, winds to 16 knots -

[illegible]

Location Pacific Ocean, 8th day out Oahu, Grid area

Observer Gould-Sawdell, Fleet, American Indian Date 10 January 1964 Time 0600 to 1832

Weather Wind to 19 knots, many scattered clouds, a moon

SPECIES	Abundance				Breeding			Remarks
	1-10	10-100	100-1000	1000 +	Nests	Eggs	Young	
Laysan Albatross								
Black-footed Albatross								
Wedge-tailed Shearwater								
Christmas I. Shearwater								
Audubon's Shearwater								
Bonin I. Petrel								
Phoenix I. Petrel								
Bulwer's Petrel								
Sooty Petrel								
Red-tailed Tropicbird	4							
White-tailed Tropicbird								
Masked Booby	1							
Brown Booby								
Red-footed Booby	7							
Great Frigatebird	1							collected
Golden Plover								
Ruddy Turnstone								
Wandering Tattler								
Sanderling								
Bristle-thighed Curlew								
Sooty Tern								
Gray-backed Tern								
Brown-winged Tern								
Common Noddy								
Hawaiian Noddy								
Blue-gray Noddy								
Fairy Tern								
								Total # birds = 17
								Total # Flocks = 0
								Total # Feeding flocks = 0

Location Pacific Ocean, 9th day out Oahu, Grid Area
Observer Gould-Sundell-Fleet-Amerman-Ludwig Date 11 January, 1964 Time 0605 to 1820
Weather winds up to 18 knots, several rain squalls, warm & cloudy

[illegible]

15° 11' 2" + 174° 2' 0" = 189° 13' 2"

total # Birds = 13
total # Flocks = 0
total # Feeding Flocks = 0

U a m

total # birds = 15
total # flocks = 0
Total # feeding flocks = 0

Location Pacific Ocean, 14th day out Oahu, 1 day NE Johnston Island
Observer Gould-Sandell-~~Wheat~~-Amerman-Hudwig Date 16 January, 1964 Time 0610 to 1800
Weather partly cloudy, cool in 70's, wind between 40-50 knots.

[illegible]

Location Pacific Ocean, 16th day out Oahu, Less than 100 miles SW Oahu
 Observer Gould-Sundell-Fleet-Amerman-Ludwig Date 18 January, 1964 Time 0710 to 1830
 Weather winds ca 20 knots, partly cloudy, warm

[illegible]

Location At - SEA

Observer

Date _____

Time 64 to

Weather

SPECIES	Abundance				Breeding			Remarks
	1-10	10-100	100-1000	1000 +	Nests	Eggs	Young	
R Laysan Albatross	.06							16-
C Black-footed Albatross	.50							3-4-5-6-9-14-17-18
C Wedge-tailed Shearwater	.50							4-5-6-7-14-15-16-17
Christmas I. Shearwater								
Audubon's Shearwater								
R Bonin I. Petrel	.19							4-11-12
Phoenix I. Petrel								
Bulwer's Petrel								
Sooty Petrel								
C Red-tailed Tropicbird	.56							6-7-8-9-10-11-12-13-17
R White-tailed Tropicbird	.13							4-7-
C Masked Booby	.56							6-7-8-9-10-11-13-16-17
R Brown Booby	.06							3
A Red-footed Booby	.75							4-6-7-8-9-10-11-12-13-14-15-16
C Great Frigatebird	.63							3-5-6-7-10-11-13-16-17-18
Golden Plover								
R Ruddy Turnstone	.13							3-19
Wandering Tattler								
Sanderling								
Bristle-thighed Curlew								
C Sooty Tern	.50							4-5-6-8-9-15-17-18
Gray-backed Tern								
Brown-winged Tern								
Common Noddy								
R Hawaiian Noddy	.06							4-
Blue-gray Noddy								
U Fairy Tern	.25							4-6-17-18
R Pomeria Farger	.13							3-18
U Leach's Petrel	.31							4-5-6-9-13
R B-R Petrel	.06							11-
U W-N Petrel	.38							11-12-13-14-15-16
R Rermodea Petrel	.06							17-

16 DAYS

JANUARY

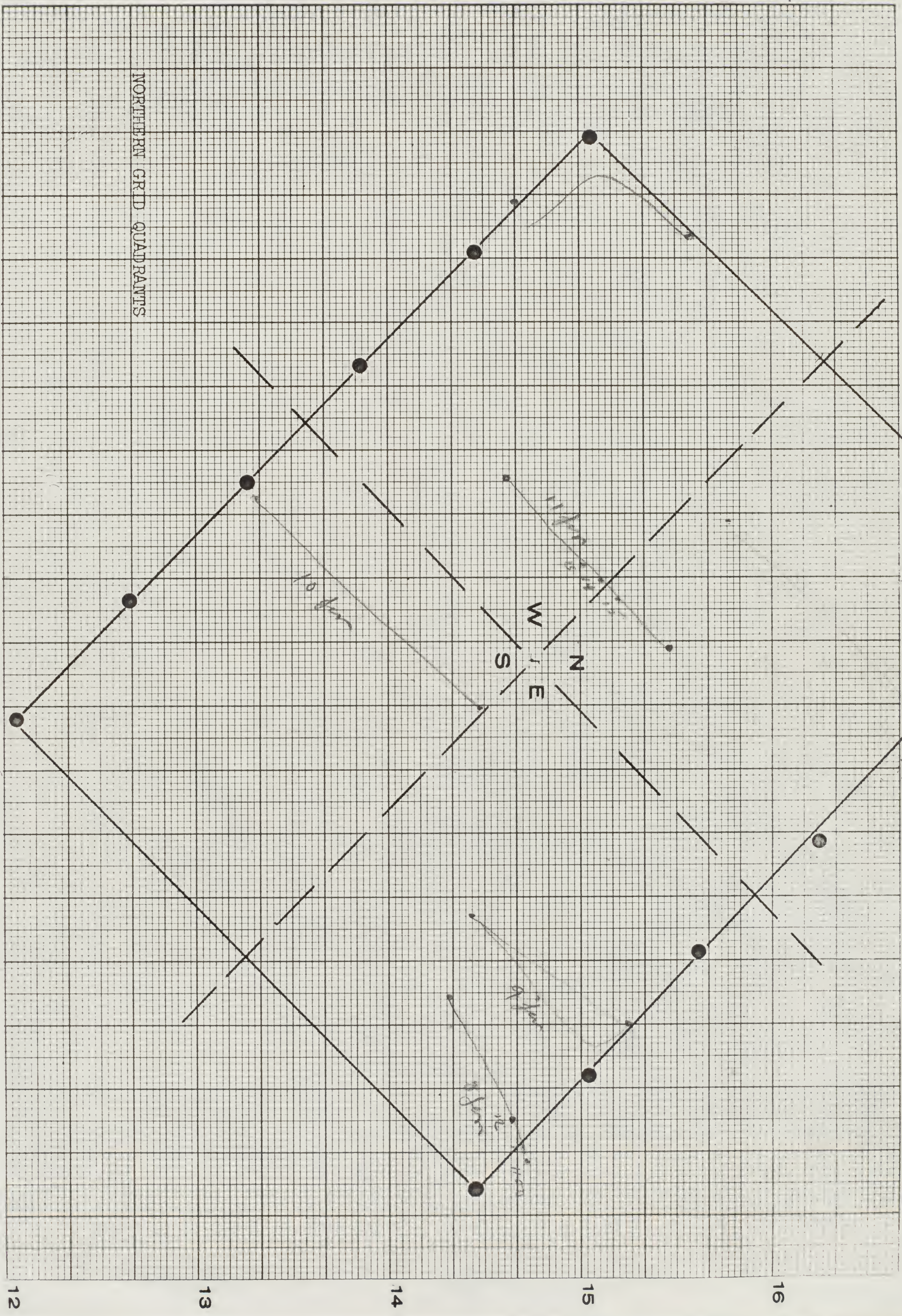
1964

Locality

DATE	MILES from OA 4C		MILES from Johann		Sunrise PH	Sunset	MILES SR-SS	MILES in DARKNESS
	1200	2400	1200	2400				
3	59 WSW	152 WSW	686 ENE	588 ENE	1030	1806	57	55
4	255 WSW	378 WSW	585 ENE	362 ENE	0706	1835	117	116
5	411 WSW	422 WSW	229 ENE	218 ENE	0727	1832	100	122
6	426 WSW	477 WSW	212 ENE	263 E	0721	1737	98	128
7	592 WSW	677 WSW	173 E	132 SE	0635	1754	78	106
8	757 WSW	825 WSW	127 S	165 S	0642	1805	74	85
9	792 WSW	805 WSW	120 S	91 SSW	0648	1803	75	79
10	817 WSW	985 WSW	217 SW	269 SW	0652	1835	96	127
11	917 WSW	837 WSW	186 SW	93 SW	0658	1812	73	107
12	861 WSW	957 WSW	120 W	223 WSW	0652	1816	97	111
13	1028 WSW	951 WSW	291 WSW	207 WSW	0704	1820	79	129
14	877 WSW	772 WSW	133 W	38 NE	0703	1809	85	109
15	682 WSW	588 WSW	69 NE	152 ENE	0649	1757	69	109
16	514 WSW	419 WSW	226 ENE	321 ENE	0604	1740	93	97
17	325 WSW	235 WSW	415 ENE	505 ENE	0728	1830	68	109
18	153 WSW	77 WSW	587 ENE	663 ENE	0700	1818	70	92

174
173
172
171
170
169

NORTHERN GRID QUADRANTS



DATE 3 JAN 64

Time at entrance to Pearl Harbor = 1038W

Time at sunset = 1806 Position at sunset = 20-52.0N 158-44.5W ✓

Miles traveled from entrance to Pearl Harbor to sunset = 57

Miles traveled from sunset to 2400 hours = 55⁰¹

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	1135 ✓ 1240 ✓	VISUAL LORAN	158-00.5W 158-10.0W	21-10.5N ✓ 20 59.0N ✓
2.	1714 ✓ 1815 ✓	LORAN LORAN	158-35.0W 158-45.8W	20 53.7N ✓ 20 51.5N ✓
3.	1927	LORAN	158-55.0W	20 47.7N ✓
4.				
5.				
6.				

DATE 4 JAN 64

Time at sunrise = 0706 Position at sunrise = 20-28.0N 160-43.0W ✓

Time at sunset = 1835 Position at sunset = 19-46.5N 162-35.0W

Miles traveled from 0000 hours to sunrise = 61

Miles traveled from sunrise to sunset = ~~117~~ 117⁰¹

Miles traveled from sunset to 2400 hours = 65 55

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0734W ✓	LORAN	16051.2W	20-28.0N ✓
2.	0935 ✓	Loran	161-09.0W	20-22.0N ✓
3.	1030 ✓	Loran	161-14.5W	20 20.0N ✓
4.	1115 ✓	Loran	161-22.0W	20-16.5N ✓
5.	1505 ✓	Loran	162-02.0W	20-00.0N ✓
6.	1644 ✓	Loran	162-18.5W	19-53.5N ✓
7.	1915 ✓	Loran	162-42.0W	19-44.0N

DATE 5 JAN 64

Time at sunrise = 0727^W Position at sunrise = 18-29.2N ✓ 163-31.2W
 Time at sunset = 1832^W Position at sunset = 17-54.0N 163-27.5W ✓
 Miles traveled from 0000 hours to sunrise = 71
 Miles traveled from sunrise to sunset = ~~97~~ 150 01^K
 Miles traveled from sunset to 2400 hours = 51

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0515W ✓	LORAN	163-38.0W	18-50.0N
	0642W ✓	"	163-33.5W	18-35.0N
	0732W ✓	"	163-31.0W	18-27.5N
2.	0917W ✓	"	163-27.8W	18-19.5N ✓
	1015W	"	163-25.0W	18-10.5N ✓
3.	1121W	"	163-22.0W	18-00.0N ✓
	1245W	"	163-18.5W	17-47.0N ✓
4.	1335W	"	163-23.0W	17-48.0N ✓
5.	1411W	"	163-20.0W	17-51.7N ✓

6. Position at time of Plankton
 Detail

DATE 6 JAN 64

Time at sunrise = 0721^W Position at sunrise = 17-57.5N 163-02.0W ✓
 Time at sunset = 1737^X Position at sunset = 17-10.0N 164-16.0W ✓
 Miles traveled from 0000 hours to sunrise = 66
 Miles traveled from sunrise to sunset = 98 01^K
 Miles traveled from sunset to 2400 hours = 62

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0715W	LORAN	163-02.10W	17-58.5N
	0740W	LORAN	162-59.0W	17-54.5N ✓
2.	1005W	LORAN	163-03.0W	17-41.5N ✓
	1130W	LORAN	163-14.0W	17-33.0N ✓
3.	1305W	LORAN	163-30.0W	17-26.0N ✓
	1600W ✓	LORAN	164-00.0W	17-16.5N ✓
4.	1702X	LORAN	164-16.5W	17-12.3N
	1819X	LORAN	164-20.5W	17-09.5N
5.	1920X	LORAN	164-30.5W	17-06.0N

6. Position at time of plankton
 Detail

5-JAN 64

TIME OF FIX	TYPE OF FIX	LONG.	LAT.
1517 W	LORAN	163-12.5 W	17-44.2 N ✓
16-16 W	LORAN	163-21 W	17-39.5 N ✓
1726 W	LORAN	163-31 W	17-48.5 N ✓
1830 W	LORAN	163-27.5 W	17-55.0 N ✓
1912 W	LORAN	163-23.0 W	17-59.5 N ✓
2046 W	LORAN	163-10.5 W	17-53.0 N ✓
2325 W	LORAN	163-18.0 W	17-34.5 N

DATE 7 JAN 64

Time at sunrise = 0635x Position at sunrise = 16-18.5N 166-07.0W
 Time at sunset = 1754x Position at sunset = 15-36.0N 167-14.0W
 Times and miles from Johnston Island at nearest point = 080800x 124 miles
 Miles traveled from 0000 to sunrise = ~~57~~ 58 67 RSS
 Miles traveled from sunrise to sunset = 78 OK
 Miles traveled from sunset to 2400 = 43 x8

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0633x	LORAN	166-06.5W	16-18.5N
	0747x	LORAN	166-13.5W	16-15.0N
2.	0911x	LORAN	166-25.0W	16-09.0N
3.	1130x	LORAN	166-37.0W	16-00.0N
4.	1440x	LORAN	166-54.5W	15-51.0N
5.	1917x	LORAN	167-24.0W	15-28.0N
6.	Position at time of plankton Detail LORAN - 166-13.5W 16-15.0N			

DATE 8 JAN 64

Time at sunrise = 0642 Position at sunrise = 14-51.0N 168-41.0W
 Time at sunset = 1805 Position at sunset = 14-19.2 169-49.0W
 Miles traveled from 0000 to sunrise = 53 49
 Miles traveled from sunrise to sunset = 74 OK
 Miles traveled from sunset to 2400 = 30 36

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0620x	CELESTIAL	168-38.0W	14-52.0N
2.	0940x	LORAN	168-55.0W	14-44.0N
3.	1415x	LORAN+celes.	169-26.0W	14-31.5N
4.	1832x		169-51.5W	14-18.0N
5.				
6.	Position at time of plankton Detail 1449.8 168-43.5W 1448.8N			

Time at first leg of the actual grid = ca 1030
 Miles between sunrise to first leg of grid = ca 25 mi
 Miles between first leg of grid and sunset = ca 49 mi
 Position at first point of grid = 14-41.5N 169-01W

Position where we turned
 onto 2nd leg of grid = 14-05
 170-27

6-
25.61.111

apt
0.6
2.21

2.21 : 9.21.2

DATE

9 JAN 64

Time at sunrise = 0648 Position at sunrise = 14-26.0N 170-14.0W
 Time at sunset = 1803 Position at sunset = 15-15.0N 169-40.2W
 Miles traveled from 0000 hours to sunrise = 39 24
 Miles traveled from sunrise to sunset = ~~48~~ 75 OK
 Miles traveled from sunset to 2400 hours = 55 OK

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0622 X	CELESTIAL	170-16.5W	14-24.0N
2.	1109 X	CELESTIAL+LORAN	169-54.0W	14-47.5N 14-41.5N
3.	1456 X	CELESTIAL+LORAN	169-31.8W	15-03.0N
4.	1831 X	CELESTIAL	169-44.0W	15-17.0N
5.	posit at FIRST point of GRID when TURNED		170-27.0W	14-03.5N
6.	Position at time of Plankton Detail		169-12.2W	14-27.5N

DATE

10 JAN 64

Time at sunrise = 0652 Position at sunrise = ~~177~~ 14-29.2N 171-19.0
 Time at sunset = 1835 Position at sunset = 13-18.5N 172-25.5
 Miles traveled from 0000 hours to sunrise = 72
 Miles traveled from sunrise to sunset = 96 OK
 Miles traveled from sunset to 2400 hours = 55

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0622 X	CELESTIAL	171-15.0W	14-32.5N
2.	1101 X	CELESTIAL	171-43.0W	14-04.5N
3.	1507 X	CELESTIAL LORAN	172-08.5	13-40.0N ✓
4.	1845 X	CELESTIAL	172-26.5W	13-17.0N
5.				
6.	Position at time of Plankton Detail		171-20.5W	14-29.0N

DATE 11 JAN 64

Time at sunrise = 0658 Position at sunrise = 14-37.2N 172-31.0W
 Time at sunset = 1812 Position at sunset = 15-28.0N 171-38.0W
 Miles traveled from 0000 hours to sunrise = 57 60
 Miles traveled from sunrise to sunset = 73 01K
 Miles traveled from sunset to 2400 hours = 44 47

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0639X	CELESTIAL	172-34.0W	14-34.0N
2.	1145X	CELESTIAL	172-11.0W	14-53.5N
3.	1845X	CELESTIAL	171-24.5W	15-31.0N
4.				
5.				
6.	Position at time of Plankton Detail 172-29.5W 14-38.0N			

DATE 12 JAN 64

Time at sunrise = 0652 Position at sunrise = 16-42.0N 171-02.0W ✓
 Time at sunset = 1816 Position at sunset = 15-47.2N 172-16.8W ✓
 Miles traveled from 0000 hours to sunrise = 53
 Miles traveled from sunrise to sunset = 97 01K
 Miles traveled from sunset to 2400 hours = 58

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0637X	CELESTIAL	171-00.3W	16-40.0N
2.	1140X	CELESTIAL	171-33.0W	16-26.0N
3.	1525X	CELESTIAL + LORAN	172-02.0W	15-59.0N
4.	1842X	CELESTIAL	172-19.5W	15-44.5N
5.				
6.	Position at time of Plankton Detail 171-05.0W 16-45.0N			

DATE 13 JAN 64

Time at sunrise = 0704 Position at sunrise = 14-40.0 N 173-57.5 W
 Time at sunset = 1820 Position at sunset = 15-34.5 N 173 47.0 W
 Miles traveled from 0000 hours to sunrise = 72⁰¹⁰
 Miles traveled from sunrise to sunset = ~~60~~ 79
 Miles traveled from sunset to 2400 hours = 52

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0641 X	CELESTIAL	173-55.0 W	14-36.2 N
2.	1008 X	LORAN + CELES	174-08.5 W	14-50.0 N
3.	1121 X	" "	174-16.5 W	14-58.3 N ✓
4.	1515 X	" "	174-03.0 W	15-16.5 N ✓
5.	1852 X	CELES CELESTIAL	173-44.0 W	15-38.0 N
6.	Position at Time of Plankton Detail		173-59.5 W	14-41.5 N

DATE 14 JAN 64

Time at sunrise = 0703 Position at sunrise = 16-52.5 N 172-18.0 W
 Time at sunset = 1809 Position at sunset = 17-01.5 N 170-53.0 W
 Miles traveled from 0000 hours to sunrise = 64
 Miles traveled from sunrise to sunset = ~~80~~ 85⁰¹⁰
 Miles traveled from sunset to 2400 hours = 45

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0642 X	CELESTIAL	172-22.5 W	16-53.0 N
2.	1120 X	LORAN + CELESTIAL	171-57.0 W	16-53.0 N
3.	1428 X	" "	171-30.5 W	16-56.0 N ✓
4.	1605 X	" "	171-12.0 W	17-00.2 N ✓
5.	1838 X	CELESTIAL	170-49.0 W	17-01.5 N
6.	Position at Time of Plankton Detail		172-14.5 W	16-53.0 N

Time at last point of grid ca 1540
 miles between sunrise + grid point = 61
 miles between grid point + sunset = 24

DATE 15 JAN 64

Time at sunrise = 0649 Position at sunrise = 17-14.0N 169-06.8 W
 Time at sunset = 1757 Position at sunset = 17-32.0N 168-01.5W
~~Time of arrival at last point of actual grid = 141515X~~
 Miles traveled between 0000 and sunrise = 55
 Miles traveled between sunrise and sunset = ~~55~~ 69 OK
 Miles traveled between sunset and 2400 = 54
~~Miles between sunrise and last point of grid = 55~~
~~Miles between last point of grid and 2400 = 79~~

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0735X	LORAN	169-01.5W	17-15.0N
2.	1044X	LORAN	168-43.0W	17-14.5N
3.	1130X	LORAN	168-34.5W	17-18.0N
4.	1530X	LORAN	168-17.5W	17-25.2N
5.	1803X	CHESS LORAN	168-01.0W	17-32.0N
6.	1935X	LORAN	169-47.5W	17-38.0N

DATE 16 JAN 64

Time at sunrise = 0604X Position at sunrise = 18-16.5N 166-22.5W
 Time at sunset = 1740X Position at sunset = 18-44.8N 164-50.7W
 Miles between 0000 and sunrise = 42
 Miles between sunrise and sunset = 93 OK
 Miles between sunset and 2400 = 55
 Time and miles from Johnston Island at nearest point = 150143 65 miles

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0730X	LORAN	166-11.0W	18-21.5N
	0929X	LORAN	165-54.0W	18-25.5N
2.	1030X	LORAN	165-47.0W	18-27.5N
	1118X	LORAN	165-40.5W	18-29.8N
3.	1327X	LORAN	165-24.5W	18-35.0N
4.	1625X	LORAN	165-02.0W	18-41.5N
	1805X	LORAN	164-48.0W	18-46.0N
5.	1910X		164-40.0W	18-49.0N
6.	1910X			

DATE 17 JAN 64

Time at sunrise = 0729W Position at sunrise = 19-16.3N 163-05.5W
 Time at sunset = 1830W Position at sunset = 19-41.8N 161-58.5W
 Miles traveled from 0000 hours to sunrise = 57
 Miles traveled from sunrise to sunset = 68
 Miles traveled from sunset to 2400 hours = 58

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	<u>0715W</u>	<u>LORAN</u>	<u>163-07.5W</u>	<u>19-15.5N</u>
	<u>0900W</u>	<u>LORAN</u>	<u>162-50.5W</u>	<u>19-22.5N</u>
2.	<u>1023W</u>	<u>LORAN</u>	<u>162-40.0W</u>	<u>19-26.5N</u>
	<u>1108W</u>	<u>LORAN</u>	<u>162-35.0W</u>	<u>19-28.0N</u>
3.	<u>1422W</u>	<u>LORAN</u>	<u>162-13.0W</u>	<u>19-35.0N</u>
	<u>1636W</u>	<u>LORAN</u>	<u>161-56.7W</u>	<u>19-42.2N</u>
4.	<u>1914W</u>	<u>LORAN</u>	<u>161-38.0W</u>	<u>19-53.0N</u>
6.	<u>Position at time of abort not fixed</u>			

DATE 18 JAN 64

Time at sunrise = 0700 Position at sunrise = 20-37.5N 160-14.0W
 Time at sunset = 1818 Position at sunset = 20-41.0N 159-02.0W
 Miles traveled from 0000 hours to sunrise = 58
 Miles traveled from sunrise to sunset = 70
 Miles traveled from sunset to 2400 hours = 34

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	<u>0635W</u>	<u>LORAN</u>	<u>160-19.0W</u>	<u>20-38.0N</u>
	<u>0746W</u>	<u>LORAN</u>	<u>160-07.0W</u>	<u>20-38.0N</u>
2.	<u>0929W</u>	<u>LORAN</u>	<u>159-54.5W</u>	<u>20-37.5N</u>
	<u>1112W</u>	<u>LORAN</u>	<u>159-45.7</u>	<u>20-34.8N</u>
3.	<u>1309W</u>	<u>LORAN</u>	<u>159-26.5</u>	<u>20-31.2N</u>
	<u>1707W</u>	<u>LORAN</u>	<u>159-07.0</u>	<u>20-37.5N</u>
4.	<u>1818W</u>	<u>LORAN</u>	<u>159-02.0</u>	<u>20-41.0N</u>
5.	<u>1908W</u>	<u>LORAN</u>	<u>158-56.8</u>	<u>20-43.0N</u>
6.	<u>Position at time of abort not fixed</u>			



NG

DATE Mar 3Pg. # 1

obs. began 1020 — Pearl entrance

time	species	#	dir.	hgt.	remarks	loc.
1023	Brown Booby (imm.)	1	—	—	— feeding next to buoy	
1027	Ruddy Turnstones	2	—	—	—	
1039	Booby sp.	1	E	—	diving into water once	
1042	B.F. Albatross	1	—	—	following ship.	
1050	—	2	—	—	" "	
1052	Jaeger	1	E	30'	—	
1052	B.F. Albatross	2	—	—	Following passing ATF # 113	
1054	Frigate	2	SW	150'	1/2 mi in front of ship. Both birds ♀	
1100	B.F. Albatross	2	—	—	Following ship	
1100	Porpoise	4	—	—	Ran in front of ship for 2 min.	
1105	B.F. Alb.	4	—	—	Following ship	
1107	Jaeger	1	—	—	Dove, sat on water	
—	1110	7	—	—	B.F. Albatross	
—	1112	9	—	—	B.F. Albatross, 2 Jaeger following ship.	
1117	B.F. Albatross	14	—	—	9 BFA on water, 5 following 1 Jaeger.	
1123	Frigatebird	1	↘	150 ft.	juvenile	
1140	1140	4	—	—	Black Footed Albatross } now following the ship	
		1	—	—	Jaeger	
	1155	5	—	—	Black Footed Albatross } now following ship. 1 Jaeger Dred phone	
		2	—	—	Jaeger. } the other is molting & has a large white patch on upper surface of wing.	
			—	—	Dred phone Jaeger sat on water.	
1158	Jaeger	1	—	—	This is a third bird. can be told by plumage	
1202	Jaeger	3	—	—	—	
	1202	11	—	—	BFA	
1210	Br. Booby	1	SE	30	Ad.	
1214	—	—	—	—	6 B.F. Albatross, 5 Jaegers	
1215	—	—	—	—	16 BFA	
1230	—	—	—	—	12 BFA, 2 Jaegers	



DATE Jan 3
Pg. # 2

time species # dir. hgt. remarks loc.

1235	BFA Albatross	17			9 on water in one flock	
1238	Br. Booby	1	NW	50	circling behind ship	
1245	Blk-Ftd Albatross	1			collected by Captain Keppler	
1315					resumed speed	
				1 BFA		
				1 Jaeger		
1330				4 BFA		
				3 Jaeger (4 on water a few min. before)		
1345	BFA Albatross	7				
	Pomarine Jaeger	6				
1347	Ruddy Turnstone	1			circled ship	
1348	"				collected by Bob Fleet	
1400	Pomarine Jaeger	9			garbage being dumped } counts from fantail	
1405	" "	12				
1417					resumed speed	
1420	Pomarine Jaeger	8				
	Blk-Ftd Albatross	14				
1442	Pomarine Jaeger	7				
	Blk-Ftd Albatross	6				
1505	Pomarine Jaeger	5				
	Blk-Ftd Albatross	8				
					1515 12 Black footed Albatross } following ship	
					7 Pomarine Jaegers	
1533					1533 1 Pomarine Jaeger collected by Jim Ludwig	
1544	Tropicbird sp?	2		200 ft.	1544 2 Tropicbird sp	
					1600 1 BFA Albatross	
					1 Pomarine Jaeger	
1604					Resumed speed	
1615					2 Black. footed Albatross	
1630					5 " " "	
1635	BFA Albatross				2 Pomarine Jaeger	
1645					One collected on stem line by Fleet (Banded & released at 1700 Band #)	
1700	B.F. Alb.				4 BFA Albatross	
1700	W Noddy	1		0	7 following ship	
1715	B.F. Alb.	4			Sitting on floating log. looked like Common	
	Pom. Jaeger	2			following ship	

OKP/13



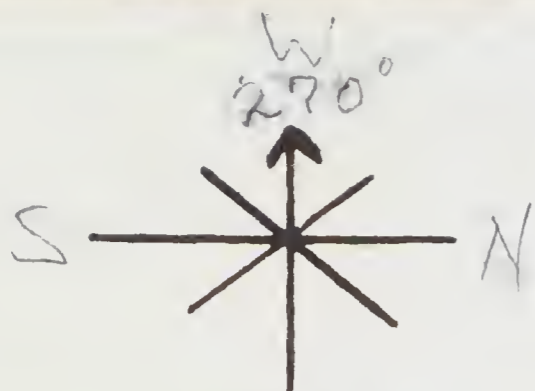
DATE Jan 3
Pg. # 3

time species # dir. hgt. remarks loc.

1730 - 7 B.F. Alb., 2 Pom. Jaegers around ship
1745 - 4 " " " "
(Pat reports 15 + 4, respect., from fantail at same time)

1800 rain squall 3 Pomarine Jaegers
sitting on water + 2 other flying alt
~~Passed by in~~
1802 Rain squall passed by

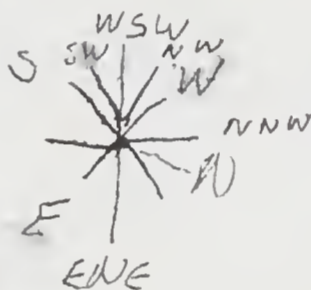
observation ended 1810



DATE January 4, 1964
Pg. # 1

obs began @ 0707

time	species	#	dir.	hgt.	remarks	loc.
0622	Sooty Tern	2			Flew over calling - heard in water. Ludwig	
0710	B.F. Albatross	2			following ship	
0732	Wedge tail	1	N			
0732	Bonin Is. Pet.	1	N			
0734	Sooty Tern	1	N	5'-10'	flying very low on water	
0755	B.F. Albatross	(2)			following ship	
0800	Pterodroma	2	E		seen by watch (Dresner)	
0830	steering	2	45°		WSW	
0935	Black-footed Albatross	1			collected off ten tail	
0956					2 more BLK-Ftd Albatross observed, one settled on water near dead bird resumed speed	
1010	Hawaiian Noddy Tern	1			flying around ship circled ship once	
1122	White-tail Tropicbird	1	E	200'		
1229	Red-footed Booby	1	ENE	30'	adult with traces of brown in tail	
1252	Wh. T. Tropicbird	1	E	70'	Adult	
1257	Shearwater?	1	SSE	20'	light below, probably wedge tail	
1355	Bonin Petrel	1	"	10-20'		
1426	Harcourt's Storm Petrel	1	"	10'		
1445	"	1	NNW	5-10'	light diagonals on upper wing surfaces	
1502	Storm Petrel	2	S	low		
1528	Sooty Tern	4	ENE	"		
1537	Fairy Tern	1	ENE	low		
1550	Storm Petrel?	1	SE	low	soliton forehand like Hawaii	
1555	Blue-grey Woodstork	1	SE	low	very white, underparts slightly washed with cream, upper parts all very light tan, towards brown below a greyish - flew like Harcourt's storm petrel.	





DATE 4 Jan
Pg. # 2

time	species	#	dir.	hgt.	remarks	loc.
1620 1721	Sooty Tern	6	E	30-40'	1620 heavy rain squall Bearing into wind; Flying between squalls	
					1723 - 1800 heavy rain	
					observation ended 1835	

1835



DATE 5 January, 1964
Pg. # 1

observation began 0651

time	species	#	dir.	hgt.	remarks	loc.
					changed course last night to search area of wrecked planes (search plane last night some plane in this area)	
0707	albatross	1			Too dark to see color or pattern but bird ca 200 yds off port	
0727						
0748	Blk & Ft. Albatross	1	⊙		probably same bird as at 0707	
0814	wedge-tail	2	⊙		circling in same place - both light phase	
0845	" - " Lt. phase	1	SSE			
0936	Wedge-tail Harcourt's Storm Petrel	1 5	⊙		Sitting together on water. Flown in circles as we approached. Wedgetail in new plumage.	
0945	Blk-Ftd Albatross	1				
* 0830	Blk-Ftd Albatross	2			observed by Capt. Kepler intermediate dark light phase	
0951	Wedge-tail	1				
1011	Harcourt's	1	SSE		Following ship with one Albatross for about five minutes	
1100	Frigate (Brid)	1	NNW		in sight about 5 min	
1103	Pterodroma	1	E			
1104	Frigate (Brid)	1	NW			
1105	Frigate (Brid)	1	S	70'	♂	
1115	Frigates (Brid)	2	⊙	100'+	circling & flying together - probably same as above.	
1140	Blk-Ftd Albatross	1	SSE		seen - but lost	
1256	Frigate	1				
1403	Frigatebird	1			circling	
1435	Frigatebird	1			immatures	
	Wedge-tail	2			} Flock not feeding	
	Harcourt's Storm Petrel	1				
	Sooty Tern	7				

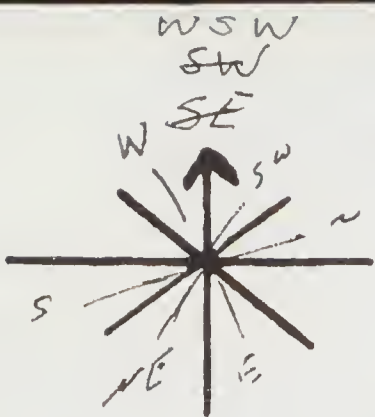


DATE 5 JANUARY 1964
Pg. # 2

time	species	#	dir.	hgt.	remarks	loc.
1440	wedge tail	2	SSW		} Present off Jan tail	
1446		2	"			
1440		1	"			
1500	Harcourt's Storm Petrel	2	ES 1/2	5'-0	following each other	
1523	wedge tail	1	-	5-30'	Very far out (1-2 mi)	
1614	Change course to 315° NW					
1651	B. F. Albatross following ship (1)					
1833	Frigatebird	1				
1850	Watch seemed					

Two birds probably a Tern and a tropicbird followed ship last night (reported by watch)

[illegible]



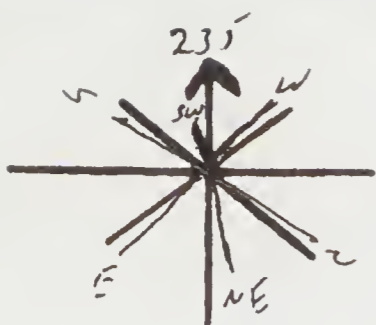
DATE 6 Jan. 64
Pg. # 1

36
2

Obs. begun 0708


	time	species	#	dir.	hgt.	remarks	loc.
	0708	B.F. Albatross	1			following ship	
0742	0742	Wedgetail	1	S		flying with Albatross	
0752	0752	Masked Booby	1	SE	10-20'	Adult	
0842	0842	B.F. Albatross	2			following ship	
0850	0850					Resumed course & speed after retrieving float	
0920	0920					Course to SW	
0930	0930	B.F. Albatross	2			following ship	
1056	1056	R.F. Booby	1	SE	20-50'	- Came in from E, circled ship twice, flew off	
1133	1133	R.F. Booby?	2			To the S.W. Juvenile Bird.	
1225	1225	9 sooty tern 3 wedgetail 1 frigate (adult)	1	SW	10'	Black-foots following ship Very far in front of ship. Probably the 1056 Bird. Scattered at our approach - food scared down; actively feeding on squid terns flew to south	
1236	1236	1 sooty 2 wedgetail 1 fairy tern				feeding on squid	
1248	1248	wedgetail	1	WSW	10'		
1337	1337	Shearwater	1	S		1000 yards out ahead	
1412	1412	Wedgetail	1	ENE			
1413	1413	Tropic bird	1	S		- Seen by deck crew.	
1435	1435	P.T. Tropic bird	1	S	20'	different from above.	
1447	1447	passer	same	bird		sitting on water.	
1516	1516	Wedgetail	1	ENE	10'		
1543	1543	Harcourt's Storm Petrel	1	ENE			
1610	1610	Frigate	2	ENE	200'	Soaring, circling	
1615	1615		2			Black-Footed Albatross following ship	
1700	1700					collected Black-footed Albatross (Capt. Kipker.)	
1732	1732	Red-ft. Booby	1	juv.		collected by Jim Ludwig	
1800	1800					time change back 1 hour	
1716	1716	Red-ft. Booby	2	juv.	50-75'	1 juv. + 1 adult.	
1723	1723	Harcourt's Storm Petrel	1	SSW			
1727	1727	Red-ft. Booby	3			1 ad + 1 juv. - 1 ad + 1 juv. same as at 1716. + 1 sub adult	
1737	1737	Red-footed Booby	1			5 tagged together & flew in formation over 5 min. collected by Jim Ludwig (3 other boobies (1727) still flying around)	

Observation
Record
1750



DATE 7 Jan. 1964
Pg. # 1

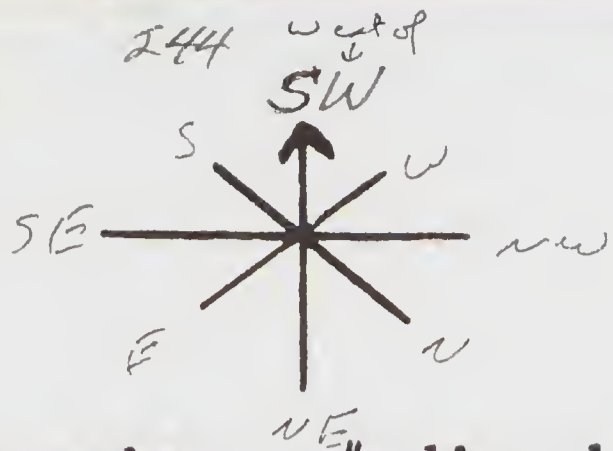
observation began 0540

time	species	#	dir.	hgt.	remarks	loc.
0638	Tropicbird	1	↓ ENE	200'		
0745	Flock Pterodroma Shearwater	3 2			actively feeding, but too far to identify.	
0811	Wedge-tailed	1	SW			
0858	White-tailed Tropicbird	1	SW 237	100'	adult passed about 150 ft off bow of ship in direct flight	
0908	Red-tailed Tropicbird	1		250'	adult circled high above ship shot by Capt. Kepler but bird flew off toward W and disappeared after circling several times	
0934	Red-tailed Tropicbird	1	NW	200'	adult	
0938	Blue-faced Booby	1		adult	feeding about 400 yds in front of ship (hit water at least three times) on school of flying fish. flew directly toward ship shot by Capt. Kepler and Jim Ludwig but not recovered	
1002	Red-footed Booby	1			immature approached rear of ship and commenced following	
1006					Red-footed Booby immature collected by Jim Ludwig	
1057	Wedge-tailed Shearwater	1	SW	2-10'	light phase	
1106	Red-tailed Tropicbird	1			adult observed on water about 100 yds off bow slightly to starboard	
1107					Red-tailed Tropicbird collected before it could take off by Jim Ludwig adult	
1228	Red-tailed tropicbird	1	W	10-200'	took off from water; adult	
1318	Wh.t. tropicbird	1	NE	200'	circled over ship, flew off behind	
1402	R.f. booby	1			Collected by Fleet; imm.	
1438	Storm Petrel sp.	1	NE			
1516	Red-tailed Tropicbird	1	S		adult flushed from water about 75 yds off port bow	
1555	Masked Booby	1	SE→		trash dumped from ship (which attracted bird) ship then circled	
1728	Black fish? whale?	1	NNE		 - spout all black what we could see	




DATE 7 Jan. 1964
Pg. # 2

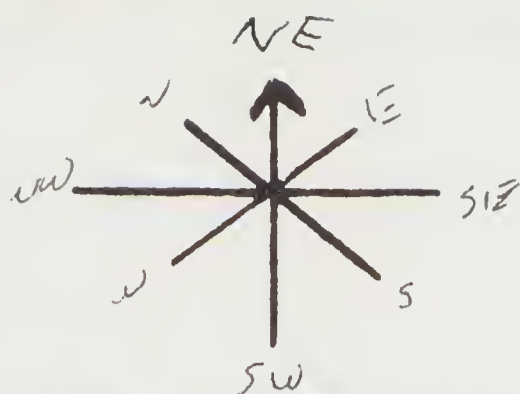
time	species	#	dir.	hgt.	remarks	loc.
1735	Frigatebird	1			ca 2 miles off toward horizon with ship	
1737	"	1			ca 1 1/2-2 miles off at 45° angle from horizon	
1745	masked Booby	1			adult	
1749					Observation secured 1800	



DATE 8 JANUARY 1964
Pg. # 1

Observations began 0540

time	species	#	dir.	hgt.	remarks	loc.
0543	Sooty Tern	1			heard calling briefly too dark to observe	
0652	Blue-faced Booby	1			Adult circling over and feeding on flying fish	
0700					calling as diving	
0715-0730					Ships stopped.	
1100	Storm Petrel	1			In the midst of many flying fish & Tuna or JACK.	
1230	Red-footed Booby	2	SSE		- seen by Dresner.	
1316	Brown? Booby Imm.	1	NE	20'	continued past fantail without detour, in low and toward ship.	
1511	P.T. Tropic bird	1	W	40'	Uniform Dark Brown except for Belly which was light Brown. Flew like Brown Booby.	
1634	whale	2	N		— circled low —	
1656	Red-tail Tropic bird	1			— probably Black Fish	
1715	whale	2	N		sub adult 250' high.	
1817	Red-footed Booby	1			part of same herd as above at 1634	
					 — spout	
					immature approached from port side of fantail and circled several times as if trying to land and roost on rear mast	
					Observations ceased 1825	



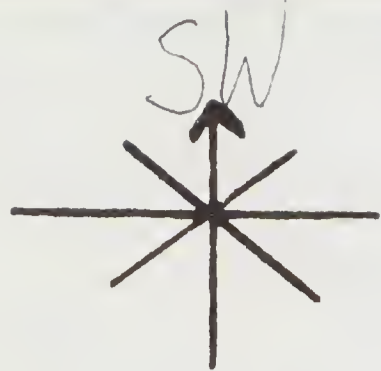
DATE 9 Jan 64
Pg. # 1

Obs. begun 0540

time	species	#	dir.	hgt.	remarks	loc.
0545	Sooty TERN	1	NE		Heard calling	
0658	R.F. Booby	1	NE	10'	Adult	
0715	Booby Masked	2	E		Adult. sat on water about 20 sec, then continued flight; no feeding observed	
0731	R.F. Booby	1	E	40'	Imm.	
0737	" "	2	E	10-20'	Sitting on water, then flew. One appeared much greyer (grey phase?), other brown ^{light} brown phase or juv?.	
0744	Bird	1	N		Grey-brown; large; may have been juv. red foot but different flight (petrel-like slides with wingbeats in between) and chunkier body, wider wings, shorter tail	
0752	Whale?	1		-5'	Bermudez Petrel? Fusiform body, 15-20' long, white tip on the dorsal fin. May be genus <u>Orca</u> .	
1101	Red-footed Booby	1	E	1-3'	immature skimming very low over water	
1135	Birds	2?			On horizon? Reported from bridge.	
1208	Harporhiza Storm Petrel	1	SE		seen by bridge watch	
1310	R.F. Booby	1	NE	20'	Collected by P. Gould; subadult? Flying far from tail right along port side of ship, started across bow nearly outlined against horizon.	
1400	Bird	1	@			
1406	Shearwater	1	ESE			
1412	R.F. Booby	1	NE	20'		
1423					Booby collected by Gould	
1430	Bl. Fed. Albatross	1	@		investigated dye marker of above booby. Comfort moved not observed	
1556	Red-tailed Tropicbird	1			adult collected by Captain Kepler	
1603	Red-footed Booby	1			immature collected by Ken AMERMAN	
1640					Blackfish 1	
1655	Booby	1	oel.	SE		
1717	Red-ft. Booby	2	SW		1 ad 1 imm.	
1720	Pterodroma?	1		5'	observed at about 1500 yds by JAY Dresner and that is all	
					Observations ceased 1830	

NW
↑

204114.00
1224
106



DATE 10 January 1964
Pg. # 1

observation began 0600

time	species	#	dir.	hgt.	remarks	loc.
0802	Pterodroma	3	—	0-20'	Feeding (half-mile off). May have been more than 3 birds.	
0820	Storm Petrel	1	—	—	Seen from Bridge.	
0828	R.F. Booby	1	E	50'	(juv.)	
0847	R.T. Tropicbird	1	Q	300-400'	Adult.	
1122	R.T. Tropicbird	1	SW	70'	circling in front of ship - making partial dives.	
1220	Red-footed Booby	1		10'	adult flew in front of ship and landed on water about 100 yds off port bow	
1252	Red-footed Booby	1	W	30'	immature flew in front of ship	
1330	Red-tailed Tropicbird	1		150'	adult circling behind ship	
1340	Masked Booby	1		1'-40'	adult circled in wide sweeps behind ship approached to within 200 yds. of ship	
1340	Red-footed Booby	1		1'-10'	immature circled about 2500 yds behind ship boobies within 100 yds. of each other on one occasion up to 3000 yds. apart while still circling low over water	
1419	Pterodroma	1	SW	1-3'		
1524	R.T. Tropicbird	1	Q	100'	Adult.	
1558	Booby sp.	1			seen off stern by Dresner from bridge. Ad.	
1630	Frigate	1		200'	Ad. ♂ Drifted in over ship, collected by P. Fleet 1640.	
1831	Shearwater Petrel	1	NW	10'	Fast flight, rapid wingbeats. Pterodroma?	

observation resumed 1832

0652-0752
0752-0852
0852-0952



DATE 11 January 1964
Pg. # 1

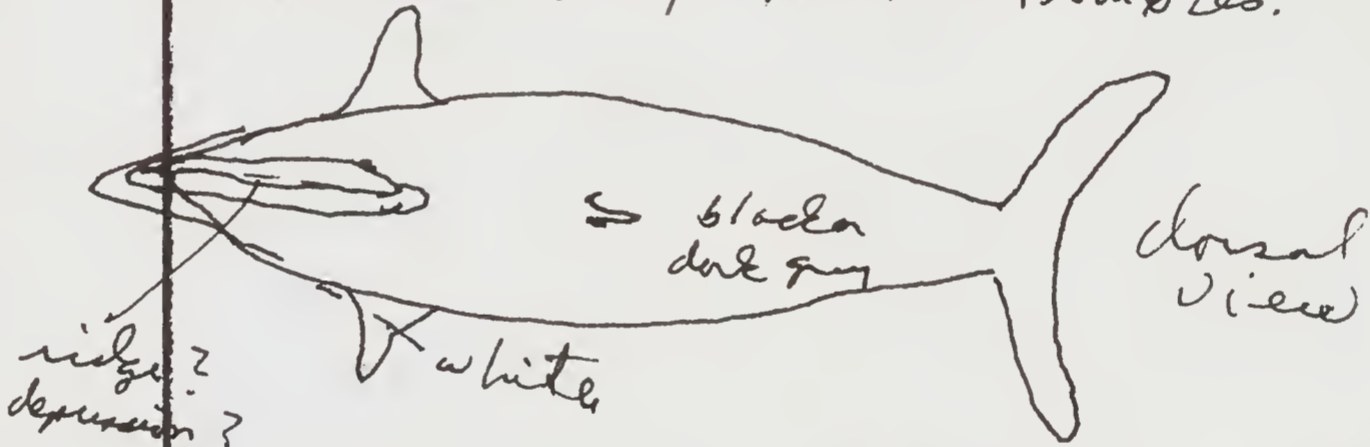
time species # dir. hgt. remarks observation began 0605 loc.

0825 Red-tail Tropicbird 54 300-400' at least two adults. made a series of false dives each time ending up lower to the water until they were only 20-30' above the water. at one point two of them, while high in the air, made upward glides and hovered at the top of the glide. these two remained together.
Collected one bird. the second bird came over to the bird in the water (bird in water not living or moving except by wave action) and hovered over it for over 10 minutes. whale boat laughed topicking dead bird + second bird hovering over first was collected by Bob Fleet. third bird came boat with a fourth + both were collected by Bob Fleet in the whale boat. 1st two birds were adults other two were juveniles

0825 whales 2

circled around ship for over 1/2 hour while ship was stopped for plankton samples.

Possibly Fin whale



whitish below - dorsal fin = dorsal view

0925 Petrel-Shearwater (White-necked Petrel?) P. eximius

1 SE

1-3'

larger than Wedge-tailed Shearwater wings and back dark gray undersurface of wings white. head and neck apparently mostly or completely white throat and belly white tail white. flight more like shearwater than petrel but this may have been due to strong winds (ship running into wind 30 knots/hour (34 miles/hour) relative wind speed

0952 Red-tailed Tropicbird 1 NE

200-300'

adult flew parallel with ship for several minutes but never approached closer than 600 yds. finally disappearing from sight in front of ship

1004

Red-tailed Tropicbird sighted again in front of ship ca. 4000 yds. away flying parallel with ship's course

1012 Red-tailed Tropicbird 1 NE

600-800'

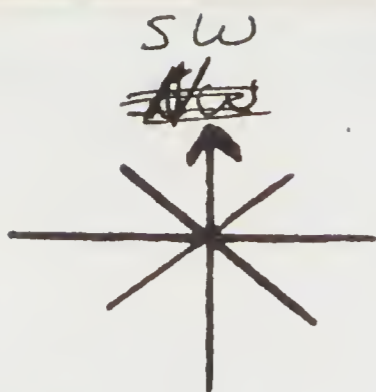
second bird observed with first at about 8000 yds. in front of ship appeared to engage in aerial display and chase

0658-0759
0759-0859
0859-0959



DATE 21 Jan. 64
Pg. # 2

time	species	#	dir.	hgt.	remarks	loc.
1325	Petrel - Shearwater <i>P. externa</i>	1	SW	10'	Gray-Brown BACK w white rump patch. white below with ² white on wing linings. larger by 1/2 Than Bonin Petrel. Flew low To water in typical Shearwater-petrel manner.	
1519	Red-footed Booby	2	NW	5-20'	immatures flying toward edge of rain squall	
1540	Dark-rumped Petrel	1	SE	1'-5'		
1544	BONIN Island Petrel	1	SE	1'-5'		
1552	Masked Booby	1			Red-footed Boobies reported down water	
1540	<i>P. externa</i> Dark-rump Petrel Redfooted Booby <i>small plume</i> Bonin Petrel Pterodroma	1 2 1 2			ad diving over water but not actually feeding. Dark rump petrel followed a Red footed Booby for several minutes, very closely.	
1552	Redfooted Booby	1	ad		joined two at 1540 & stayed with them	
1600	7 lock <i>P. externa</i> white-shed Petrel Pterodroma	2 1			feeding - 7 lying fish jumping * 3 of the Boobys were the same ones seen before	
	* Red-footed Booby	4				
	Frigatebird	1	ad		ad ♀	
1724	MASKED Booby	1			Adult collected	
					observation resumed 1820	
1831	Masked Booby	1		ad		



DATE Jan. 12, 1964
Pg. # 1

time species # dir. hgt. remarks 2 Red-tail Tropic birds at 0210 in light by watch. loc.

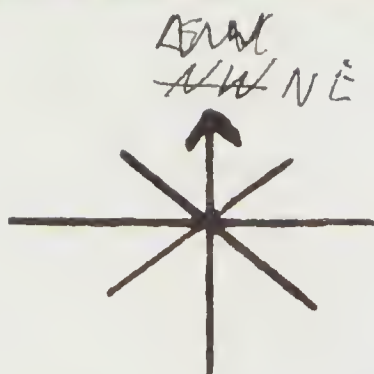
0610					observation begun.
0715					Stopped.
0810					Started. Dir. 315 N.W.
0817	Pterodroma	1	NE	10'	400 yds. white below. dark above, ¹ / ₂ Larger than
0845	sp.				Bonin petrel.
0902	Pterodroma	1	NW	wt	Course change to SW. off bow large size 800-1500 yds. white below dark above (probably about same size as White-necked Petrel) flight similar to White-necked Petrel
1030	Bonin Island	1	NW	wt	} observed by watch from bridge (JAY DRESNER)
	Petrel	1	NW	wt	
	Pterodroma	1	NW	wt	
1045	Pterodroma	1	NW	wt.	observed by watch from bridge (JAY DRESNER)
1128	Bird	1			Large size, rapid tern-like wingbeats. Hovered over one area for short period, then dropped to water (did not dive). May have been booby, or, less likely, frigate. Not seen after it disappeared below horizon.
1243	Storm Petrel	1			seen by watch (Mr. Smiley)
1315	White-rail Petrel	1			flying around bow of ship. } these two birds appeared just after the tail end of a rain squall passed by (winds up to 30 knots true)
1318	Storm Petrel	1	S		
1444	Red-footed Booby	1	E	adult	40'-50'
1615	Red-footed Booby	1	SE	5'-20'	subadult ca 800 yds off stern of ship
1624	Pterodroma	1	NW	wt	small size underparts white dark above possibly Bonin Island Petrel
1625	Red-footed Booby	1	immature		circled over stern of ship at close range before being collected by Captain Kepler
1736	Red-footed Booby	1	NW	30'	immature circled to within 200 yds. of stern of ship
1746	Red-tailed Tropicbird	1			adult circled about 150 ft. above stern of ship
1750	Red-footed Booby	3		5'-20'	2 immatures, 1 subadult circled off port side of ship

0652-0751
0752-0912
0913-0912



DATE JAN. 12, 1964
Pg. # 2

time	species	#	dir.	hgt.	remarks	loc.
1800	R.F. Booby	3+			another imm. suddenly appeared with other three. All sat on water off stem.	
1802	P. extension W. necked petrel	1		5-10'	Passed from bow to stem, circled over boobies on water.	
1815	S. storm petrel	1		NT	No white rump patch observed.	
1830					Observations ceased	
1836	Booby sp.	3			flew behind stern of ship too dark to identify	
1842	Booby sp.	1	SW	30'	flew past starboard side at close range	
1845					Observations resumed (too damned dark to see anymore!!!)	



DATE 13 January
Pg. # 1

time	species	#	dir.	hgt.	remarks	observation began = 0550	loc.
0704	0700 Bird ?	1	N	10'	Glimpsed twice angling away from ship at about 300 yards.		
	0750 L.F. Booby	2			Imm., approached ship along starboard, crossed bow 100 yds out, heading E & joined 2nd bird.		
	0753 R.T. Tropicbird	1	S-SE	100'	Ad.		
	1 minute after Sunrise 0705				<i>P. eximius</i> white-necked Petrel		
	0921 Booby sp.	1			0921 booby observed by watch off stern of ship circled but bird could not be located ^{again} ship		
	1308 Masked Booby	1		30'	Ad. flew alongside ship 150 yards, then downwind to rear		
	1308 Frigate	1		75'	Ad. ♂ soaring over booby		
	1414 G. Frigate	1	NE	WT	appeared & head white, much flapping.		
	1455 Hancock's Storm Petrel	1	NW	WT			
	1536 Masked Booby	1		5-60'	Adult & subadult circled in close to investigating the ship and then flew parallel to the ship off the port side for several thousand yards observed to dive several times		
	1545 Hancock's Storm Petrel	2		WT	off starboard bow observed by watch (Jay Dresner)		
	1547				one bird seen sitting on water about 100 yds off port bow about		
	1617				Masked Booby noted above located on water and collected by Jim Ludwig and Jay Dresner		
	1730 Pterodroma sp.	1	NW	WT	ca. 1000 yds. off port bow white below dark above		
1820					Observations secured 1830		



time species # dir. hgt. remarks Obs. begun 0545 loc.

0738	Wedgetail	1	E	WT		
0745	"	1	W	"	Many have been first individual reappeared.	Some Bird Off
0845	Storm Petrel <i>P. cyclanura</i>	1			0821 under way	
0904	Storm Petrel <i>P. cyclanura</i>	1	E → W	WT	Came to within 100 yards off port then dropped back.	
0945	Red-tld. Booby	1		25'	adult	
1313	Tropicbird sp	1	E	60'	bird being severely buffeted by winds of ca. 20 mph	
1513	Storm Petrel	1	N	10'	Running ahead of Rain Squall.	
1517					Rain Squall	
1811	Red-tld Booby	1	N	5-25'	Imm.	

observation secured 1815

0705-0803

DATE 15 JANUARY 1964
Pg. # 1



0649
time species # dir. hgt. remarks Observations commenced 0605 loc.

0658	Sooty Tern	1	S	50-150'	bird flying against strong winds
0724	Pterodroma	1	S	10'	Bird moving rapidly, close to waves.
0730	Booby sp.	1	N	wt to 10'	1000 to 2000 yds off stern of ship
0803	Pterodroma	1		wt	observed by watch from bridge
1100	"	1	S		flying very fast
1235	Red-footed Booby	3	N	5-30'	1 Adult, 2 immatures circling ca. 1000 yds. off port side of ship
1521	wedge-tail?	1			flying over a Japanese fish net (in operation)
1550	Pterodroma white-vel Petrel Pterodroma	# 1	NW		
1551	white-vel Pterodroma	1			
1610	wedgetail	1			
1618	shearwater-Petrel	2	N	10'	
1630	Wedgetail	1	E		fm.
observation resumed 1800					
2315	Tropicbird	1			} heard calling near ship
	Tern (sooty)	1			

1757



DATE 16 January 1964
Pg. #

time species # dir. hgt. remarks observation begun = 0610 loc.

0618 B.F. Booby 1 E 10-30' Imm. flying alongside ship - still around at 0630 - still around at 0641 - still around at 0655

0730 ~~0820~~ B.F. Albatross 1 Following off fantail; reappeared at 0820

0832 Wedgetail 1 N 47

0832 Laysan Alb. 1 Following

0850 Masked Booby 1 30' adult

0902 Frigate ~~bird~~ 1 E ad. ♀

0915 Laysan & B.F. Albatross reappeared

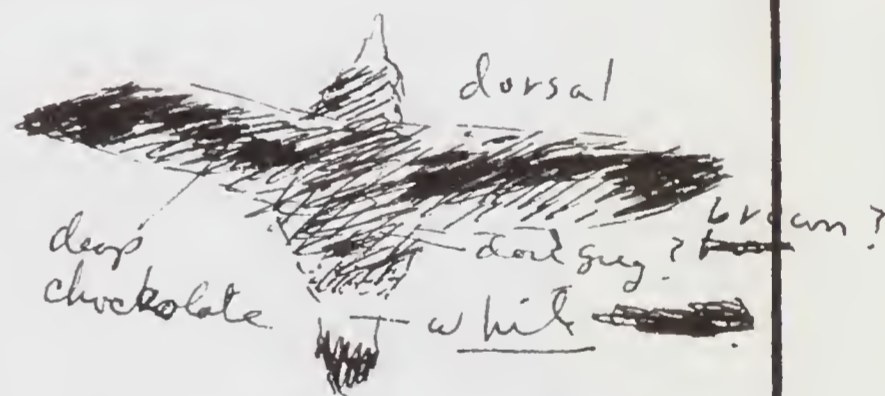
0919 White-necked Petrel 1 E 47 followed ship for about one minute approached to within ca. 400 yds.

0952 Red-footed Booby 2 E 5-30' immatures followed ship for ca.

1008 Black-footed Albatross 1 E 5-20' second individual observed about 1500 yds off stern

1327 Black-footed Albatross 2 Following Ship.

1344 Pterodroma 1



Positively Pterodroma in flight pattern and body proportions. Appeared to be around size of White-neck Petrel. White rump patch (base of tail?) wide and distinct. Underneath pattern like Bonin Petrel. Gould + Ludwig ca 200-400 yds off starboard

1512 Pterodroma 1 N

1605 Black-footed Albatross 1 E third Albatross observed following ship

1705 Red-footed Booby 1 E 5-50' subadult circled around bow of ship several times observed catching flying fish scared up by ship

Observations secured 1800



17
DATE 17 JANUARY 1964
Pg. # 1

time	species	#	dir.	hgt.	remarks	Observations commenced 0730	loc.
0854	Red-tailed Tropicbird	1	SE	150'	flapping heavily against strong wind		
0935	Black-footed Albatross	1			Following ship; still present 1030		
1037	Fairy Tern	1	NW	40'			
1114	Fairy Tern	1	NW				
1115	Frigate	1	W	200'	Ad. ♀		
1210	Black-footed Albatross	2					
1320					Second individual joined the other following.		
1327	Fairy Tern	1	NE	40'	flew close to ship on port side for several minutes		
1329	Sooty Tern	50			Block actively feeding in heavy rain squall. no flying fish observed Turned off radar, but could not get close to the flock.		
	Fairy Tern	8					
	Masked Booby						
	Masked Booby	1					
1337	Black-footed Albatross	1			third individual following ship		
1400	Sooty Tern	20			SMALL } feeding in & out of rain squall both from }		
	Fairy Tern	1					
	Wedge tail	2					
ended 1410							
heavy rain squall ended 1438							
1442							
1516	Black-footed Albatross	1			Fourth individual following ship		
1536	Kermadec Petrel	1	SE		brown dorsally. light belly, dark wing linings, white patches at ventral tip of wing, Pterodroma flight pattern and body conformation - Gould's Sandell.		
1655	Black-footed Albatross				6 now following ship; 1 at 1730; 3 at 1800; 4 at 1814		
1810	R.T. Tropicbird	1	ESE	150'	Sunset		
1829							
1840					Secured watch.		



DATE 18 January 1964
Pg. # 1

time species # dir. hgt. remarks Observation began = 0700 loc.

0700	Blk. Ft. d. Albatross	3			Following Ship	
0733	Flock "	4			" "	
0800	Sooty Tern	25			Actively feeding, no flying fish visible	
	Fairy Tern	1			birds actively hitting water	
	Frigate	1				
0835	Sooty Tern	3	SE			
0835	Sooty Tern	26+	SE		feeding, no flying fish observed	
0841	Sooty Tern	1	S			
0942	Black-footed Albatross	8	N			
	Porpoise	8			still present 1005	
1007	Sooty Tern	2	N			
1020	Ruddy Turnstone	1	E			
1033	Sooty Tern	15+			on starboard horizon	
	Black-footed Albatross				1000-1; 1015-1; 1020-2; 1040-3; 1100-3; 1115-4; 1200-1; 1220-2; 1230-garbage dumped, both settled by it.	
					1427 one individual observed of port side of following ship	
1554	Pterodroma	1	SE	wt	large size	
1559	Pomarine Jaeger	1	W	40'	dark phase	
1630	Sooty Tern	25+	E	U.T. 70'	Flock feeding then stopped & flew in higher altitude search pattern then moving some direction parallel to us.	
1750	B. F. Albatross	- (2)				
1825	Frigate	1	NE	400'	above ship	

5181

DATE 03, JANUARY 1964

TIME	LAT	LONG	PRES	WEA	VIS	SLP	DRY B	DEW PT	HUMID	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100																
0200																
0300																
0400																
0500																
0600																
0700																
0800																
0900																
1000																
1100	21.16	157.56														
1200	21.08	158.03														
1300	20.59	156.06	20.0	0	10	1015.3	77.8	68.7	73	.4	.4	040 06 05	79.0	26.0	048	135° 0.0
1400	20.59	158.08	20.0	E120	10	1014.8	78.2	69.3	74	.6	.6	040 06 05	79.0	—	—	—
1500	20.58	158.19	20.0	E120	10	1015.3	77.2	67.0	71	.7	.7	040 06 05	79.0	18.0	046	269° 10.6
1600	20.56	158.19	20.0	E120	10	1015.8	77.2	66.8	70	.5	.5	040 06 05	79.0	16.0	054	153° 0.0
1700	20.55	158.33	20.0	E150	10	1016.2	77.0	66.7	70	.7	.7	040 06 05	79.6	19.0	059	251° 10.6
1800	20.52	158.43	20.0	E150	10	1016.5	76.5	67.0	72	.7	.7	040 06 05	79.6	18.0	058	249° 10.6
1900	20.49	158.51														
2000	20.46	159.00														
2100	20.42	159.10														
2200	20.38	159.20														
2300	20.34	159.30														
2400	20.30	159.39														

REMARKS:

ALL TIMES LOCAL (~~WILSON~~); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

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(15)

DATE 04, JANUARY 1964

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUMID %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	20.30	159.49													
0200	20.30	160.00													
0300	20.29	160.09													
0400	20.28	160.17													
0500	20.28	160.26													
0600	20.28	160.34													
0700	20.28	160.44													
0800	20.28	160.56	200E100	8	1017.3	74.1	68.1	81	1.0	1.0	040 05 05	79.0	27.0	033	270° 10.0
0900	20.25	161.02	200E90 R--	8	1018.4	75.0	67.7	78	1.0	1.0	040 05 05	79.0	15.0	019	247° 10.0
1000	20.21	161.12	150E200 900R-	8	1018.8	74.0	68.2	82	1.0	1.0	040 06 07	79.0	25.0	035	190° 8.0
1100	20.17	161.20	160E200 900RWU	8	1018.3	76.0	67.9	76	1.0	1.0	040 06 06	79.0	20.0	023	245° 10.0
1200	20.18	161.29	200E400 900RWU	8	1017.3	76.0	68.8	78	1.0	1.0	040 06 06	79.0	15.0	013	245° 10.0
1300	20.08	161.39	E20080 R- RWU	8	1016.4	76.0	66.3	72	1.0	1.0	040 06 06	79.0	23.0	056	250° 10.0
1400	20.04	161.49	E20080	8	1015.8	76.5	67.6	74	1.0	1.0	040 05 06	79.0	19.0	058	250° 10.0
1500	20.00	162.00	E20080 RWU	6	1015.4	74.0	68.2	82	1.0	1.0	040 05 06	79.0	17.5	085	247° 10.0
1600	19.58	162.11	E20080	4	1015.6	74.0	71.2	91	1.0	1.0	040 05 05	79.0	13.5	056	245° 10.0
1700	19.53	162.22	E200RW	1	1015.8	73.6	68.4	83	1.0	1.0	040 05 04	79.0	16.0	099	245° 10.0
1800	19.48	162.31	E200RW	1	1016.4	73.0	71.6	95	1.0	1.0	040 05 04	79.0	14.5	049	245° 10.0
1900	19.44	162.40													
2000	19.40	162.50													
2100	19.35	162.59													
2200	19.31	163.09													
2300	19.27	163.19													
2400	19.23	163.28													

REMARKS:

ALL TIMES LOCAL (~~WATSON~~); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

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DATE 5 JANUARY, 1964

TIME	LAT	LONG	PRES	WEA	VIS	SLP	DRY B	DEW PT	HUMID %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	X 19.18	163.37														
0200	X 19.14	163.43														
0300	X 19.10	163.49														
0400	X 19.02	163.43														
0500	X 18.53	163.40														
0600	X 18.43	163.37														
0700	X 18.32	163.33	200E800		8	1013.4	75.4	68.5	79	.9	.9	0500606	79.0	21.0	038	160 10
0800	X 18.27	163.32	200E800		8	1014.1	75.8	67.8	76	1.0	1.0	0500606	79.0	20.0	019	110 10
0900	X 18.22	163.29	200E800		8	1014.3	76.0	69.6	80	1.0	1.0	0500505	79.0	19.0	037	160 10
1000	X 18.14	163.26	E200800		8	1015.3	76.6	67.9	74	1.0	1.0	0500505	79.0	17.0	027	165 10
1100	X 18.04	163.23	E200800		4	1015.3	71.0	65.3	82	1.0	1.0	0500505	79.0	23.0	038	165 10
1200	X 17.54	163.20	E200800		6	1014.2	74.2	68.4	82	1.0	1.0	0500505	79.0	16.0	055	166 10
1300	X 17.45	163.20	100E200 700R-		6	1013.6	74.0	70.6	89	1.0	1.0	0500505	79.0	14.0	058	166 10
1400	X 17.50	163.22	E200900		8	1012.5	73.0	67.1	82	1.0	1.0	0500505	77.0	16.0	035	314 11
1500	X 17.46	163.18	E200900		8	1010.8	74.0	68.6	83	1.0	1.0	0500505	77.0	20.0	034	130 11
1600	X 17.40	163.19	E200900 RWD		8	1010.8	74.2	69.0	84	1.0	1.0	0500505	77.0	13.0	039	320 11
1700	X 17.45	163.28	200E1200 100		10	1010.7	74.8	68.6	81	.8	.8	0500505	77.0	11.0	032	042 11
1800	X 17.52	163.30	200E1200/10		10	1010.3	75.0	69.2	82	.8	.8	0500505	77.0	11.0	032	042 11
1900	X 17.58	163.24														
2000	X 17.57	163.18														
2100	X 17.51	163.10														
2200	X 17.45	163.06														
2300	X 17.38	163.11														
2400	X 17.33	163.22														

REMARKS:

ALL TIMES LOCAL (~~WISKEY~~); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
 WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

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12-5-63

16.7
17.1

DATE 06, JANUARY 1964

TIME	LAT	LONG	PRES	WEA	VIS	SLP	DRY B	DEW PT	HUMID %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	X 17.41	163.30														
0200	X 17.47	163.37														
0300	X 17.54	163.34														
0400	X 18.00	163.28														
0500	X 18.07	163.20														
0600	X 18.03	163.10														
0700	X 18.00	163.05														
0800	X 17.52	162.58	200		10	1010.7	75.0	69.2	82	.5	.5	040 07 05	78.0	6.0	030	160° 10.0
0900	X 17.49	162.57	E200/00		10	1011.3	76.3	69.0	78	.7	.7	040 07 05	78.0	10.0	089	160° 10.0
1000	X 17.42	163.02	200/00		10	1012.3	77.3	69.7	77	.5	.5	040 07 05	78.0	10.0	104	225° 10.0
1100	X 17.37	163.09	200/00		10	1011.8	78.0	69.4	75	.4	.4	040 05 03	78.0	10.0	098	225° 10.0
1200	X 17.30	163.17	E200		10	1010.8	78.0	69.4	75	.6	.6	040 05 03	78.0	10.0	107	225° 10.0
1300	X 17.26	163.30	200		10	1010.4	79.0	68.6	70	.5	.5	040 05 03	78.0	4.0	110	245° 10.0
1400	X 17.23	163.39	200		10	1008.8	78.2	68.7	72	.3	.3	040 05 03	78.0	5.0	060	245° 10.0
1500	X 17.20	163.49	200		10	1009.3	78.3	69.0	73	.3	.3	040 05 03	78.0	5.0	048	245° 10.0
1600	X 17.17	164.00	200		10	1009.3	77.2	68.2	76	.3	.3	040 05 03	78.0	5.0	060	240° 10.0
1700	X 17.20	164.12	200		10	1009.8	77.9	68.7	73	.3	.3	040 05 03	78.0	—	—	—
1800	X 17.10	164.16	200		10	1010.2	77.5	69.8	77	.3	.3	040 05 03	78.0	6.5	026	245° 10.0
1900	X 17.07	164.28														
2000	X 17.03	164.38														
2100	16.59	164.46														
2200	16.55	164.55														
2300	16.50	165.04														
2400	16.46	165.12														

REMARKS:

ALL TIMES LOCAL (~~WATSON~~); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

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12-5-63

DATE 07, JANUARY 1964

TIME	LAT	LONG	PRES	WEA	VIS	SLP	DRY B	DEW PT	HUMID %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	16.42	165.21														
0200	16.37	165.30														
0300	16.33	165.39														
0400	16.29	165.48														
0500	16.24	165.56														
0600	16.20	166.05														
0700	16.15	166.13	200		10	1010.8	76.0	69.5	80	.2	.2	100 06 03	78.0	7.0	027	240° 10.0
0800	16.14	166.16	200		10	1011.4	77.5	69.3	75	.1	.1	100 06 03	78.0	7.5	037	235° 10.0
0900	16.10	166.24	200		10	1012.0	78.7	68.3	70	.1	.1	100 06 03	78.0	9.0	029	235° 10.0
1000	16.06	166.29	200		10	1012.1	78.5	69.0	73	.1	.1	100 06 03	78.0	8.5	027	237° 10.0
1100	16.03	166.35	200		10	1013.6	79.8	69.4	70	.1	.1	100 06 03	78.0	9.0	035	237° 10.0
1200	15.58	166.40	200		10	1010.3	79.5	71.0	75	.1	.1	100 06 03	78.0	10.0	070	236° 10.0
1300	15.55	166.46	200		10	1009.3	80.0	68.8	68	.2	.2	100 06 03	78.0	10.0	074	235° 10.0
1400	15.52	166.52	200		10	1008.5	83.5	67.6	59	.3	.3	100 06 03	78.0	7.0	067	237° 10.0
1500	15.47	166.58	200		10	1008.3	81.0	68.3	65	.4	.4	100 06 03	78.0	8.0	068	235° 10.0
1600	15.42	167.03	200		10	1008.8	80.0	68.5	68	.3	.3	100 06 03	78.0	—	—	—
1700	15.37	167.11	200		10	1009.3	78.0	67.8	71	.3	.3	100 06 03	78.0	7.0	035	235° 7.0
1800	15.32	167.18	200400		10	1009.8	77.5	68.1	73	.4	.4	100 06 03	78.0	6.0	054	235° 8.0
1900	15.29	167.23														
2000	15.27	167.26														
2100	15.23	167.33														
2200	15.20	167.40														
2300	15.16	167.47														
2400	15.13	167.54														

REMARKS:

ALL TIMES LOCAL (~~WISKEY~~); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
 WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955

12-5-63

DATE 08, JANUARY 1964

TIME	LAT	LONG	PRES	WEA	VIS	SLP	DRY B	DEW PT	HUMID %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	X 15.09	168.00														
0200	X 15.07	168.08														
0300	X 15.03	168.14														
0400	X 15.00	168.21														
0500	X 14.57	168.27														
0600	X 14.54	168.35														
0700	X 14.51	168.43	200		10	1011.3	75.8	67.8	76	.2	.2	080 04 02	78.0	8.0	066	244° 3.0
0800	X 14.49	168.44	200		10	1011.8	78.0	69.1	74	.3	.3	080 04 02	78.0	8.0	052	245° 8.0
0900	X 14.46	168.50	200		10	1012.2	77.5	69.6	77	.1	.1	080 04 02	78.0	12.0	055	243° 8.0
1000	X 14.43	168.57	200		10	1012.8	79.5	69.5	71	.1	.1	080 04 02	78.0	12.0	068	245° 8.0
1100	X 14.40	169.03	200		10	1012.3	79.5	69.5	71	.1	.1	080 04 02	78.0	10.0	053	245° 8.0
1200	X 14.38	169.10	0*		10	1011.3	83.1	70.2	65	0*	0*	080 04 02	78.0	11.0	038	245° 8.0
1300	X 14.35	169.16	200		10	1010.4	79.2	68.5	70	.1	.1	080 05 03	78.0	10.0	055	245° 8.0
1400	X 14.32	169.23	200		10	1009.8	80.2	68.7	68	.1	.1	080 06 03	78.0	9.0	056	245° 8.0
1500	X 14.29	169.29	200		10	1009.8	80.5	69.0	68	.1	.1	080 06 03	78.0	13.0	043	185° 7.5
1600	X 14.26	169.35	200		10	1010.1	79.0	69.0	71	.1	.1	080 06 03	78.0	9.0	051	245° 6.0
1700	X 14.24	169.41	200		10	1010.0	79.0	69.0	71	.1	.1	080 06 03	78.0	—	—	—
1800	X 14.20	169.47	200		10	1010.4	78.5	69.9	75	.1	.1	100 06 03	78.0	10.0	050	245° 6.0
1900	X 14.18	169.53														
2000	X 14.15	170.00														
2100	X 14.13	170.05														
2200	X 14.10	170.10														
2300	X 14.08	170.15														
2400	X 14.06	170.20														

REMARKS: * Few Cu on Horizon

ALL TIMES LOCAL (WHOLE); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
 WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955

12-5-63

DATE 09, JANUARY 1964

TIME	LAT	LONG	PRES	WEA	VIS	SLP	DRY B	DEW PT	HUMID %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	X 14.03	170.25														
0200	X 14.02	170.28														
0300	X 14.06	170.26														
0400	X 14.10	170.23														
0500	X 14.15	170.20														
0600	X 14.20	170.17	200		10	1012.9	77.2	65.7	67	.1	.1	100 06 03	78.0	14.0	058	042° 8.5
0700	X 14.24	170.14	200		10	1013.4	77.0	67.5	72	.1	.1	080 06 03	78.0	11.0	043	043° 8.5
0800	X 14.28	170.11	200		10	1014.3	78.0	68.5	71	.1	.1	080 06 03	78.0	15.0	055	— —
0900	X 14.33	170.06	200		10	1014.8	78.0	67.8	70	.1	.1	080 06 03	78.0	13.5	034	055° 9.0
1000	X 14.37	170.00	200 200		10	1014.7	78.3	67.4	68	.2	.2	080 06 04	78.0	14.0	052	052° 9.0
1100	X 14.41	169.54	200 200		10	1014.5	78.9	68.2	70	.2	.2	080 06 04	78.0	14.0	048	055° 9.0
1200	X 14.46	169.48	200 200		10	1013.4	78.3	68.2	71	.2	.2	080 06 04	78.0	14.0	055	055° 10.0
1300	X 14.51	169.43	200 1000		10	1012.8	78.8	69.0	72	.2	.2	080 07 04	78.0	11.0	043	052° 10.0
1400	X 14.56	169.38	200 1000		10	1011.6	79.0	69.0	71	.2	.2	080 07 04	78.0	12.0	038	055° 10.0
1500	X 15.01	169.33	200 1000		10	1011.8	79.0	69.0	71	.3	.3	080 07 04	78.0	14.0	036	055° 10.0
1600	X 15.06	169.33	200		10	1011.7	79.8	70.7	74	.2	.2	080 07 04	78.0	13.0	044	315° 10.0
1700	X 15.11	169.38	200		10	1012.2	80.0	70.0	71	.3	.3	080 07 04	78.0	—	—	— —
1800	X 15.14	169.41	200		10	1012.0	78.2	69.2	74	.3	.3	080 07 04	78.0	15.0	044	315° 10.0
1900	X 15.20	169.46														
2000	X 15.27	169.53														
2100	X 15.35	170.01														
2200	X 15.34	170.07														
2300	X 15.26	170.16														
2400	X 15.19	170.23														

REMARKS:

ALL TIMES LOCAL (~~WATERSIDE~~); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
 WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955

12-5-63

DATE 10, JANUARY 1964

TIME	LAT	LONG	PRES	WEA	VIS	SLP	DRY B	DEW PT	HUMID %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	✓ 15.12	170.31														
0200	✓ 15.05	170.39														
0300	✓ 14.57	170.48														
0400	✓ 14.40 450	170.56														
0500	✓ 14.43	171.04														
0600	✓ 14.36	171.12														
0700	✓ 14.29	171.20	200	☉	10	1013.7	77.2	69.8	78	.5	.5	070 05 03	78.0	20.0	061	222° 10.0
0800	✓ 14.28	171.22	200	☉	10	1013.8	78.0	69.4	74	.5	.5	070 05 03	78.0	19.0	043	188° 10.0
0900	✓ 14.19	171.29	200	☉	10	1015.3	80.1	68.9	68	.3	.3	070 05 03	78.0	20.0	054	218° 10.0
1000	✓ 14.11	171.36	200		10	1014.8	78.8	69.6	73	.2	.2	070 05 03	78.0	17.0	061	220° 10.0
1100	✓ 14.04	171.43	200	☉	10	1014.3	78.0	71.2	80	.3	.3	070 05 03	78.0	19.0	060	220° 10.0
1200	✓ 13.56	171.51	200	☉	10	1013.7	81.0	69.6	68	.3	.3	070 05 03	78.0	16.0	061	221° 10.0
1300	✓ 13.50	171.56	200	☉	10	1013.0	78.9	69.3	72	.8	.8	070 05 05	78.0	19.5	064	215° 10.0
1400	✓ 13.45	172.02	200	☉	10	1012.3	78.6	69.4	73	.8	.8	070 05 05	78.0	—	—	10.0
1500	✓ 13.40	172.07	200	☉	10	1011.8	78.5	69.7	74	.7	.7	070 05 05	78.0	17.5	063	222° 10.0
1600	✓ 13.34	172.12	200	☉	10	1012.0	79.2	69.2	71	.5	.5	070 05 05	78.0	15.5	056	220° 10.0
1700	✓ 13.29	172.17	200	☉	10	1012.3	78.0	69.4	75	1.0	.3	070 05 05	78.0	16.0	057	220° 10.0
1800	✓ 13.23	172.22	200	☉	10	1012.7	78.5	69.6	74	1.0	.5	070 05 05	78.0	17.0	064	217° 10.0
1900	✓ 13.18	172.32														
2000	✓ 13.24	172.37														
2100	✓ 13.30	172.44														
2200	✓ 13.36	172.50														
2300	✓ 13.42	172.56														
2400	✓ 13.49	173.03														

REMARKS:

ALL TIMES LOCAL (✓); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
 WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955

12-5-63

DATE 11, JANUARY 1964

TIME	LAT	LONG	PRES	WEA	VIS	SLP	DRY B	DEW PT	HUMID	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	X 13.54	173.05														
0200	X 14.01	172.59														
0300	X 14.09	172.53														
0400	X 14.15	172.48														
0500	X 14.23	172.42														
0600	X 14.30	172.37														
0700	X 14.37	172.31	200		10	1014.4	77.6	68.5	73	.3	.3	080 06 05	78.0	14.0	034	043° 10.0
0800	X 14.39	172.29	200		10	1015.2	78.8	69.0	72	.2	.2	080 06 06	78.0	17.5	036	— —
0900	X 14.43	172.24	200/0		10	1016.0	79.0	68.1	69	.2	.2	080 06 06	78.0	15.0	039	047° 10.0
1000	X 14.47	172.19	200		10	1016.7	79.0	66.2	65	.1	.1	080 06 06	78.0	13.0	140	048° 10.0
1100	X 14.51	172.13	200		10	1016.1	78.5	69.2	73	.2	.2	080 06 06	78.0	15.0	025	050° 10.0
1200	X 14.56	172.09	200		10	1015.0	78.0	70.1	76	.2	.2	080 06 06	78.0	14.0	015	050° 10.0
1300	X 15.01	172.04	200		10	1014.3	77.8	68.4	68	.3	.3	060 06 06	78.0	15.0	036	045° 10.0
1400	X 15.07	171.59	200		10	1012.8	78.0	69.1	74	.4	.4	060 06 06	78.0	16.0	037	047° 10.0
1500	X 15.12	171.53	200 E1000		10	1012.7	79.0	68.9	71	.7	.7	060 06 06	78.0	15.0	031	045° 10.0
1600	X 15.18	171.48	200 1000		10	1012.8	77.8	71.1	80	.5	.5	060 06 06	78.0	24.0	014	115° 10.0
1700	X 15.23	171.43	200 E1000		10	1013.3	76.3	70.1	82	.6	.6	060 06 06	78.0	20.0	003	048° 10.0
1800	X 15.28	171.37	200 E1000		10	1013.3	76.3	71.6	86	.6	.6	060 06 06	78.0	18.0	018	049° 10.0
1900	X 15.34	171.32														
2000	X 15.38	171.26														
2100	X 15.44	171.19														
2200	X 15.49	171.12														
2300	X 15.55	171.05														
2400	X 16.00	170.57														

REMARKS:

ALL TIMES LOCAL (~~W. TIME~~); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955

12-5-63

DATE 12, JANUARY 1964

TIME	LAT	LONG	PRES	WEA	VIS	SLP	DRY B	DEW PT	HUMID	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	X 16.05	170.51														
0200	X 16.10	170.43														
0300	X 16.16	170.38														
0400	X 16.23	170.44														
0500	X 16.29	170.50														
0600	X 16.36	170.57														
0700	X 16.43	171.03	200		10	1014.4	76.0	71.8	87	.5	.5	050 05 05	78.0	20.0	075	315° 10.0
0800	X 16.46	171.06	200		10	1015.4	77.0	71.3	82	.4	.4	050 05 05	78.0	20.0	062	182° 10.0
0900	X 16.47	171.15	E200		10	1016.0	79.9	71.9	76	.6	.6	050 05 05	78.0	19.0	075	224° 10.0
1000	X 16.39	171.22	200		10	1016.3	80.0	71.6	73	.4	.4	050 05 05	78.0	21.0	064	224° 10.0
1100	X 16.32	171.29	200/-00		10	1015.3	79.5	71.0	75	.6	.6	050 05 05	78.0	20.0	064	222° 10.0
1200	X 16.24	171.36	200E1200		10	1014.3	79.0	71.5	78	.7	.7	050 05 05	78.0	18.0	069	226° 10.0
1300	X 16.17	171.43	E200800		10	1013.7	76.0	72.5	89	.8	.8	050 05 06	78.0	30.0	081	225° 10.0
1400	X 16.11	171.51	E200800		10	1013.0	79.8	69.3	70	.9	.9	050 05 06	78.0	18.0	076	225° 10.0
1500	X 16.04	171.58	200800		10	1012.5	78.0	70.1	77	.8	.8	050 05 06	78.0	19.0	071	225° 10.0
1600	X 15.56	172.05	200800		10	1013.0	78.5	72.9	83	.7	.7	050 05 06	78.0	19.5	068	225° 10.0
1700	X 15.51	172.12	E200800		5	1013.5	78.8	72.3	80	.7	.7	050 05 06	78.0	19.5	068	225° 10.0
1800	X 15.46	172.18	200E800		10	1014.2	78.6	71.8	80	.7	.7	050 05 06	78.0	19.5	068	222° 10.0
1900	X 15.41	172.24														
2000	X 15.35	172.29														
2100	X 15.28	172.37														
2200	X 15.22	172.44														
2300	X 15.15	172.51														
2400	X 15.07	173.00														

REMARKS:

ALL TIMES LOCAL (~~WISCONSIN~~); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
 WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955

12-5-63

DATE 13, January 1964

TIME	LAT	LONG	PRES	WEA	VIS	SLP	DRY B	DEW PT	HUMID %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	X 15.00	173.08														
0200	X 14.53	173.16														
0300	X 14.45	173.24														
0400	X 14.38	173.33														
0500	X 14.30	173.42														
0600	X 14.33	173.52														
0700	X 14.40	173.57	20.0	RWU	10	1013.8	76.8	72.6	87	.5	.5	090 05 05	78.5	15.0	055	315° 10.0
0800	X 14.42	174.00	20.0	100.0	10	1014.6	77.0	72.2	85	.5	.5	090 05 05	78.5	16.0	053	315° 10.0
0900	X 14.46	174.04	20.0	100.0	10	1015.2	78.0	71.6	81	.4	.4	090 05 05	78.5	16.5	052	315° 10.0
1000	X 14.49	174.08	20.0	100.0	10	1015.5	80.3	72.8	78	.4	.4	090 05 05	78.5	16.0	055	317° 10.0
1100	X 14.57	174.16	20.0	100.0	10	1014.8	80.0	73.0	79	.6	.6	090 05 05	78.5	18.0	057	316° 10.0
1200	X 15.04	174.12	20.0	100.0	10	1014.2	78.5	71.4	79	.5	.5	090 05 05	78.5	13.0	024	042° 10.0
1300	X 15.09	174.09	20.0	100.0	10	1014.3	80.0	71.6	76	.8	.8	090 05 05	78.0	16.0	045	045° 10.0
1400	X 15.19	174.04	20.0	100.0	10	1013.1	79.0	72.0	79	1.0	1.0	090 05 05	78.0	16.0	050	042° 10.0
1500	X 15.19	174.00	20.0	100.0	10	1012.3	77.5	72.4	84	1.0	1.0	090 06 06	78.0	16.0	049	041° 10.0
1600	X 15.24	173.55	20.0	100.0	10	1013.0	77.5	71.4	81	1.0	1.0	090 06 06	78.0	13.0	027	100° 10.0
1700	X 15.30	173.51	20.0	100.0	10	1012.8	76.5	72.6	88	.7	.7	090 06 06	78.0	9.0	032	045° 10.0
1800	X 15.34	173.46	20.0	120.0	10	1012.5	78.0	72.4	83	.4	.4	090 06 06	78.0	15.0	049	042° 10.0
1900	X 15.40	173.42														
2000	X 15.46	173.36														
2100	X 15.51	173.33														
2200	X 15.58	173.23														
2300	X 16.06	173.16														
2400	X 16.11	173.09														

REMARKS:

ALL TIMES LOCAL (~~WILSON~~); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955

12-5-63

DATE 14, JANUARY 1964

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUMID %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	X 16.18	173.02													
0200	X 16.24	172.55													
0300	X 16.30	172.48													
0400	X 16.37	172.41													
0500	X 16.44	172.34													
0600	X 16.50	172.26													
0700	X 16.53	172.18	2001000 RWU	8	1016.8	77.0	70.9	81	.4	.4	070 06 06	78.0	18.0	035	089° 10.0
0800	X 16.53	172.14	100E400 200R-	5	1017.4	73.0	71.0	94	1.0	1.0	070 06 07	78.0	23.0	089	099° 10.0
0900	X 16.53	172.08	2001000	10	1018.6	77.0	69.8	78	.5	.5	070 06 07	78.0	24.0	014	089° 10.0
1000	X 16.54	172.01	2001000	10	1018.4	76.0	68.8	78	.5	.5	090 06 07	78.0	22.0	013	090° 10.0
1100	X 16.54	171.55	2001000 UW	8	1017.8	75.8	70.1	83	1.0	1.0	090 06 07	78.0	24.0	353	085° 10.0
1200	X 16.54	171.49	E200 FT. R	4	1018.3	75.2	72.4	91	1.0	1.0	090 06 07	78.0	17.0	024	085° 10.0
1300	X 16.56	171.41	E200 RWU	4	1016.9	76.5	72.3	87	.9	.9	090 06 07	78.0	25.0	057	085° 10.0
1400	X 16.57	171.32	E200E800 RWU	6	1015.8	76.0	71.8	87	.9	.9	090 06 08	78.0	26.0	018	085° 10.0
1500	X 16.58	171.24	200E800	6	1015.7	78.0	70.1	77	.9	.9	090 06 08	78.0	25.0	017	085° 10.0
1600	X 17.00	171.14	200E800 RWU	6	1015.7	78.0	70.3	77	.8	.8	090 06 08	78.0	24.0	023	085° 10.0
1700	X 17.01	171.04	200E800	8	1015.6	76.7	70.9	82	.5	.5	090 06 08	78.0	23.0	038	085° 10.0
1800	X 17.01	170.55	200E800	10	1016.2	77.2	67.9	73	.2	.2	090 06 08	78.0	23.5	037	085° 10.0
1900	X 17.02	170.46													
2000	X 17.03	170.36													
2100	X 17.04	170.31													
2200	X 17.05	170.18													
2300	X 17.06	170.10													
2400	X 17.07	170.02													

REMARKS:

ALL TIMES LOCAL (~~WATERS~~); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955
12-5-63

DATE 15, January 1964

TIME	LAT	LONG	PRES	WEA	VIS	SLP	DRY B	DEW PT	HUMID	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	17.08	169.53														
0200	17.09	169.46														
0300	17.10	169.38														
0400	17.11	169.29														
0500	17.12	169.21														
0600	17.13	169.13														
0700	17.14	169.05	200800		8	1015.5	73.5	69.9	88	.4	.4	090 06 10	78.0	24.5	039	085° 8.0
0800	17.15	168.58	E200800		8	1016.2	77.0	68.3	74	.8	.8	090 06 10	78.0	24.5	039	085° 8.0
0900	17.16	168.50	E200RWU		3	1016.8	74.8	69.0	82	1.0	1.0	090 06 10	78.0	20.0	049	085° 8.0
1000	17.16	168.43	2005800		8	1017.3	76.5	68.5	76	1.0	1.0	090 06 10	78.0	20.5	030	085° 8.0
1100	17.17	168.37	2001000		8	1016.6	76.5	68.0	75	.4	.4	090 06 10	78.0	24.5	040	085° 8.0
1200	17.18	168.30	200		8	1015.8	78.0	67.1	69	.2	.2	090 06 10	78.0	21.0	056	070° 8.0
1300	17.19	168.22	200		10	1014.9	77.0	68.3	74	.3	.3	090 07 10	78.0	20.0	041	070° 8.0
1400	17.22	168.23	0*		10	1014.3	77.2	66.6	70	0	0	090 07 10	78.0	16.0	043	070° 8.0
1500	17.24	168.19	0		10	1013.8	77.2	65.4	67	0	0	090 07 10	78.0	17.0	062	008° 0.0
1600	17.26	168.15	0*		10	1014.3	77.0	65.3	67	0	0	090 07 10	78.0	17.0	047	070° 8.0
1700	17.28	168.10	200		10	1014.5	77.9	66.3	67	.1	.1	090 07 08	78.0	17.0	034	070° 8.0
1800	17.32	168.02	2001000		10	1015.1	77.0	68.3	74	.2	.2	090 07 08	78.0	20.0	054	070° 8.0
1900	17.35	167.52														
2000	17.39	167.43														
2100	17.43	167.34														
2200	17.47	167.26														
2300	17.50	167.19														
2400	17.54	167.11														

REMARKS:

ALL TIMES LOCAL (~~WISKEY~~); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
 WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955

12-5-63

DATE 16, January 1964

TIME	LAT	LONG	PRES	WEA	VIS	SLP	DRY B	DEW PT	HUMID %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	17.57	167.03														
0200	18.02	166.55														
0300	18.05	166.47														
0400	18.09	166.39														
0500	18.13	166.31														
0600	18.16	166.23														
0700	18.19	166.16	2001000		10	1015.3	75.0	74.0	97	.5	.5	080 07 10	78.0	28.0	082	070° 8.0
0800	18.23	166.08	2001000		10	1016.3	76.5	67.0	72	.4	.4	080 08 12	78.0	22.0	098	070° 8.0
0900	18.24	165.59	200E800		10	1016.8	76.7	66.9	71	.7	.7	080 08 12	78.0	20.0	077	077° 8.0
1000	18.28	165.50	200E1000		10	1017.3	77.8	66.8	69	.7	.7	080 08 10	78.0	20.0	061	076° 8.0
1100	18.29	165.42	200E1000		10	1017.3	78.0	67.8	70	.7	.7	080 08 10	78.0	26.0	072	079° 8.0
1200	18.31	165.34	2001000		10	1017.2	77.0	68.1	77	.5	.5	080 08 10	78.0	26.0	091	078° 8.0
1300	18.34	165.28	200E1000		8	1016.1	78.5	66.8	67	.7	.7	080 08 10	78.0	22.0	107	075° 8.0
1400	18.37	165.19	200		8	1015.5	79.0	67.4	67	.4	.4	080 08 12	78.0	24.0	096	075° 8.0
1500	18.39	165.13	2001000		8	1015.4	78.5	68.4	71	.3	.3	080 08 12	78.0	20.0	067	075° 8.0
1600	18.40	165.06	200		8	1015.6	78.2	68.1	71	.3	.3	080 08 12	78.0	22.0	078	075° 8.0
1700	18.43	164.56	200		8	1015.6	78.0	68.6	73	.1	.1	080 08 12	78.0	24.5	062	075° 8.0
1800	18.46	164.48	200E800		8	1016.3	75.5	68.2	78	.8	.8	080 06 12	78.0	17.0	060	075° 8.0
1900	18.48	164.40														
2000	18.51	164.31														
2100	18.54	164.24														
2200	18.56	164.17														
2300	18.58	164.09														
2400	19.00	164.02														

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
 WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955

12-5-63

DATE 17, JANUARY 1964

TIME	LAT	LONG	PRES	WEA	VIS	SLP	DRY B	DEW PT	HUMID %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	19.02	163.54														
0200	19.04	163.47														
0300	19.07	163.39														
0400	19.09	163.32														
0500	19.11	163.25														
0600	19.13	163.17														
0700	19.15	163.10	E200R	800	8	1018.7	73.0	67.1	82	1.0	1.0	080 08 10	78.0	20.0	120	072° 8.0
0800	19.18	163.00	E200R	800	8	1018.4	74.0	67.9	81	.6	.6	080 08 10	78.0	25.5	060	065° 8.0
0900	19.21	162.52	E200R	800	8	1020.3	74.0	68.5	83	.8	.8	080 08 10	78.0	11.0	091	067° 8.0
1000	19.24	162.45	E200R	800	8	1020.7	74.0	68.2	82	.6	.6	080 08 10	78.0	22.0	060	067° 8.0
1100	19.27	162.37	E200R	800	8	1020.9	77.0	67.5	72	.1	.1	080 08 10	78.0	26.0	060	067° 8.0
1200	19.31	162.29	E200R	800	8	1020.3	77.8	68.3	72	1.0	1.0	080 08 10	78.0	22.0	085	085° 8.0
1300	19.33	162.22	E200R	800	10	1019.2	75.5	68.1	78	1.0	1.0	080 08 10	78.0	20.0	061	067° 8.0
1400	19.35	162.16	E200R	800	3	1019.0	79.0	71.7	78	.8	.8	080 08 10	78.0	20.0	086	066° 8.0
1500	19.38	162.09	E200R	800	8	1016.4	79.0	64.0	60	.8	.8	080 08 10	78.0	20.0	058	066° 8.0
1600	19.40	162.02	E200R	800	8	1016.1	76.5	66.8	72	.8	.8	080 08 10	78.0	23.0	060	060° 8.0
1700	19.44	161.55	E200R	800	10	1016.8	77.5	66.5	69	.8	.8	080 08 08	78.0	26.0	077	063° 8.0
1800	19.49	161.48	E200R	800	10	1017.3	77.0	66.4	69	.7	.7	080 08 08	78.0	21.0	061	063° 8.0
1900	19.52	161.40														
2000	19.56	161.32														
2100	20.02	161.26														
2200	20.07	161.19														
2300	20.10	161.12														
2400	20.14	161.04														

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
 WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

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12-5-63

DATE 18, January 1964

TIME	LAT	LONG	PRES	WEA	VIS	SLP	DRY B	DEW PT	HUMID	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	20.17	160.56														
0200	20.21	160.49														
0300	20.24	160.41														
0400	20.28	160.34														
0500	20.33	160.27														
0600	20.38	160.20														
0700	20.38	160.12	200	10	1019.3	74.2	64.2	71	.5	.5	080 08 08	78.0	22.0	048	088°	8.0
0800	20.38	160.03	200	10	1020.3	74.9	62.6	66	.4	.4	080 08 08	78.0	20.0	068	089°	7.0
0900	20.37	159.58	200	10	1021.3	75.0	65.4	72	.3	.3	080 08 08	78.0	20.5	067	100°	7.0
1000	20.36	159.52	200	10	1022.1	74.5	66.4	75	.2	.2	080 08 08	78.0	17.0	064	098°	7.0
1100	20.35	159.46	200	10	1021.3	75.0	64.2	69	.2	.2	080 08 08	78.0	17.0	046	100°	7.0
1200	20.34	159.41	200	10	1020.8	75.9	65.9	71	.2	.2	080 08 08	78.0	17.0	051	098°	7.0
1300	20.32	159.34	200	10	1020.5	76.0	64.8	68	.2	.2	070 08 08	78.0	19.0	047	100°	7.0
1400	20.31	159.26	200 1000	10	1020.1	76.2	66.1	71	.2	.2	070 08 08	78.0	21.0	060	065°	7.0
1500	20.33	159.21	1000*	10	1020.0	78.0	65.4	65	.1*	.1*	070 08 08	78.0	15.0	051	067°	7.0
1600	20.35	159.15	0*	10	1019.8	77.5	65.4	66	.0*	.0*	070 08 08	78.0	15.0	053	060°	7.0
1700	20.37	159.08	0*	10	1019.8	75.8	65.4	70	.0*	.0*	070 08 08	78.0	11.0	060	060°	7.0
1800	20.41	159.03	0*	10	1020.1	75.0	65.3	71	.0*	.0*	070 08 08	78.0	15.0	048	055°	7.0
1900	20.43	158.58														
2000	20.46	158.53														
2100	20.49	158.46														
2200	20.52	158.39														
2300	20.55	158.32														
2400	20.58	158.25														

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
 WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

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